

AMENDMENTS TO THE CLAIMS

The following is a complete listing of all claims presently in this application, including the new claims added by way of this Response and statements identifying the claims canceled by way of this Response.

Claims 1-116 (Canceled)

(New) 117. A method for maintaining a constant volume of air flowing into an air filtration system during the use of the air filtration system, the air filtration system including: a hood adapted to be worn over the head of a user; a fan beneath the hood; a motor for driving the fan; and a power supply for powering the motor, said method comprising the steps of:

supplying a first signal from the power supply to apply a drive voltage to the motor so as to drive the motor at a constant speed;

driving the fan with the motor so as that the fan causes air to flow through the hood;

monitoring the speed of the motor to determine when the motor speed has stabilized for a predetermined amount of time;

if the motor speed stabilizes, monitoring the power supply voltage;

when the voltage of the power supply decreases, supplying a second signal from the power supply to the motor that applies the same drive voltage as the first signal so that the speed of the motor and the volume of air that the fan flows through the hood remain substantially constant.

(New) 118. The method for maintaining a constant volume of air flowing into an air filtration system of Claim 117, wherein

in said steps of supplying said first and second signals, the first and second signals are pulse width modulated.

(New) 119. The method for maintaining a constant volume of air flowing into an air filtration system of Claim 117, wherein said first signal is regulated by a by a motor speed controller and is selectively set based on user actuation of the motor speed controller.

(New) 120. The method for maintaining a constant volume of air flowing into an air filtration system of Claim 117, wherein:

in said steps of supplying said first and second signals, the first and second signals are pulse width modulated; and

in said step of supplying the first signal, a motor speed controller establishes the pulse width based on a user entered command to the motor speed controller.

(New) 121. A method for maintaining a constant volume of air flowing into an air filtration system during the use of the air filtration system, the air filtration system including: a hood adapted to be worn over the head of a user; a fan beneath the hood; a motor for driving the fan; and a power supply for powering the motor, said method comprising the steps of:

supplying a first signal from the power supply to the motor so that the motor runs at a set speed;

driving the fan with the motor so as that the fan causes air to flow through the hood;

monitoring the speed of the motor to determine when said speed has stabilized for a predetermined amount of time;

when the speed of the motor stabilizes, monitoring the power supply voltage;

when the voltage of the power supply decreases, supplying a second signal from the power supply to the motor so that the motor maintains the set speed so that the volume of air the fan flows through the hood remains substantially constant.

(New) 122. The method for maintaining a constant volume of air flowing into an air filtration system of Claim 121, wherein in said steps of supplying said first and second signals, the first and second signals are pulse width modulated.

(New) 123. The method for maintaining a constant volume of air flowing into an air filtration system of Claim 121, wherein said first signal is regulated by a by a motor speed controller and is selectively set based on user actuation of the motor speed controller.

(New) 124. The method for maintaining a constant volume of air flowing into an air filtration system of Claim 125, wherein:

in said steps of supplying said first and second signals, the first and second signals are pulse width modulated; and

in said step of supplying the first signal, a motor speed controller establishes the pulse width based on a user entered command to the motor speed controller.

(New) 125. A method for maintaining a constant volume of air flowing into an air filtration system during the use of the air filtration system, the air filtration system including: a hood adapted to be worn over the head of a user; a fan beneath the hood; a motor for driving the fan; and a power supply for powering the motor, said method comprising the steps of:

pulse width modulating a power signal from the power supply and supplying the modulated power signal to the motor so as to apply a drive voltage to the motor that drives the motor at a constant speed;

driving the fan with the motor so as that the fan causes air to flow through the hood;

monitoring the speed of the motor to determine when the motor speed has stabilized for a predetermined amount of time;

if the motor speed stabilizes, monitoring the power supply voltage;

when the voltage of the power supply decreases, adjusting the pulse width modulation rate of the power signal supplied to the motor so that the speed of the motor and the volume of air that the fan flows through the hood remain substantially constant.

(New) 126. The method for maintaining a constant volume of air flowing into an air filtration system wherein the initial pulse width modulation rate of the power supply signal applied to the motor is set by a motor speed controller based on a user-entered command entered to vary the speed of the motor.